

LSLED120W Power Supply



With universal input voltage ranging from 120-277V, this 120W 50/60 Hz power supply has a 12V, 24V, 30V and 48 V DC output. Designed for wall mount installations, this power supply has an IP67 protection rating.



Features Include:

- Constant voltage
- Metal housing with class design
- Built-in active PFC function
- Class 2 power unit
- IP67 protection rating
- Typical lifetime > 62,000 hours
- 7-year warranty



Output

DC Voltage	12V	24V	30V	48V
Rated Current	10A	5A	4A	2.5A
Ripple & Noise	150mVp-p	150mVp-p	200mVp-p	200mVp-p
Voltage Adj. Range	Adjustable for A-Type only (via built-in potentiometer)			
Voltage Tolerance ³	±2.5%	±1.0%	±1.0%	±1.0%
Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%
Load Regulation	±2.0%	±1.5%	±0.5%	±0.5%
Setup, Rise Time ⁶	1200ms, 50ms/115 V AC 500ms,50ms/230 V AC			
Hold Up Time (Typical)	12ms / 115 V AC, 230 V AC			

Input

DC Voltage	12V	24V	30V	48V
Voltage Range ⁵	90 ~ 305 V AC 126 ~ 431 V DC			
Frequency Range	47 ~ 63 Hz			
Power Factor (Typ.)	PF≥0.98/115 V AC, PF≥0.95/230 V AC, PF≥0.92/277 V AC @ full load			
Total Harmonic Distortion	THD< 20% (@ load≥50% / 115 V AC,230 V AC; @ load≥75% / 277 V AC)			
Efficiency (Typ.)	92%	93%	93%	93.5%
AC Current (Typ.)	1.4A / 115 V AC 0.6A / 230 V AC 0.55A / 277 V AC			
Inrush Current (Typ.)	COLD START 60A(twidth=375µ s measured at 50% Ipeak) at 230 V AC; Per NEMA 410			
Maximum Number of PSUs on 16A Circuit Breaker	5 units (circuit breaker of type B) / 9 units (circuit breaker type C) @230 V AC			
Leakage Current	<0.75mA / 277 V AC			

Protection

DC Voltage	12V	24V	30V	48V
Over Current	95 ~ 108%			
	Constant current limiting, recovers automatically after fault condition is removed			
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed			
Over Voltage	14 ~ 17V	28 ~ 34V	34 ~ 38V	54 ~ 63V
	Shut down o/p voltage with auto recovery re-power on to recovery			
Over Temperature	Shut down o/p voltage, recovers automatically after temperature goes down			

Environment

DC Voltage	12V	24V	30V	48V
Working Temperature	Tcase = -40~ +80°C (Refer to Output Load vs. Temperature on page 5)			
Max Case Temperature	Tcase = +80°C			
Working Humidity	20~95% RH non-condensing			
Storage Temperature Humidity	-40 ~ +80°C, 10 ~ 95% RH			
Temperature Co-efficient	±0.03%/°C (0 ~ 60°C)			
Vibration	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes			

Safety & EMC

DC Voltage	12V	24V	30V	48V
Safety Standards⁸	UL8750(type"HL"), CSA C22.2 No. 250.0-08 , EN/AS/NZS 61347-1,EN/AS/NZS 61347-2-13 independent, GB19510.1,GB19510.14,EAC TP TC 004,KC61347-1,KC61347-2-13(except for AB-type), IP65 or IP67 approved ; optional models for J61347-1,J61347-2-13 ; design refer to UL60950-1, TUV EN60950-1			
Withstand Voltage	I/P-O/P:3.75K V AC I/P-FG:2K V AC O/P-FG:1.5K V AC			
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500 V DC / 25°C/ 70% RH			
EMC Emission⁸	Compliance to EN55015, EN61000-3-2 Class C (@ load≥60%) ; EN61000-3-3,GB17743 and GB17625.1, EAC TP TC 020			
EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020			

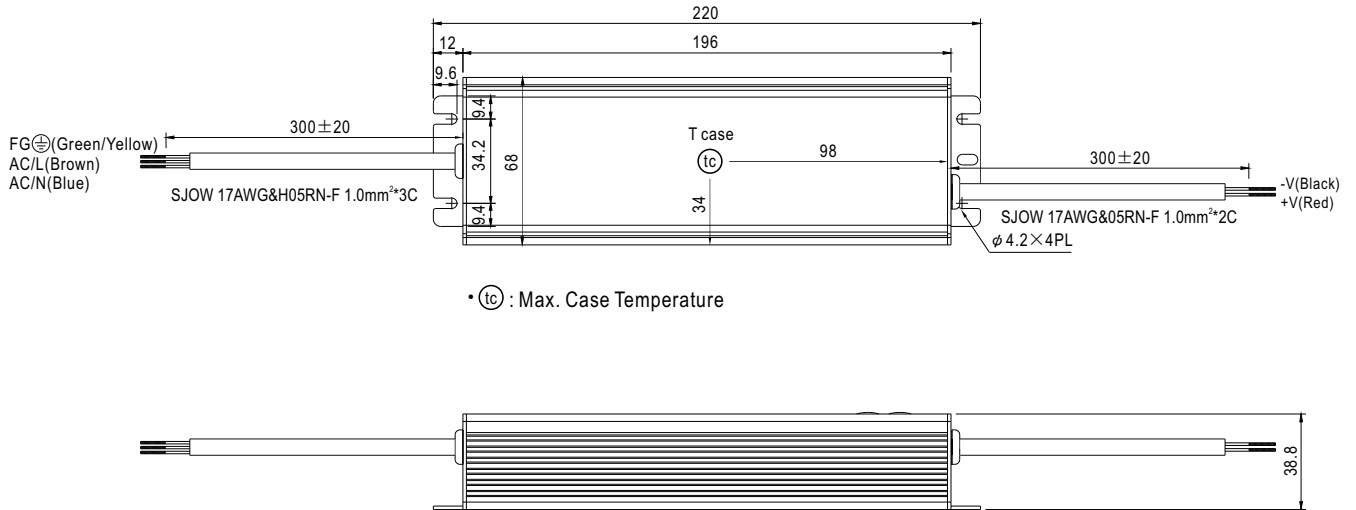
Others

DC Voltage	12V	24V	30V	48V
MTBF	559.5K hrs min. Telcordia SR-332 (Bellcore) ; 167.1K hrs min. MIL-HDBK-217F (25°C)			
Dimension	220mm x 68mm x 38.8mm (LxWxH)			
Packing	1.12 kg; 12pcs/14.4 kg/0.8CUFT			

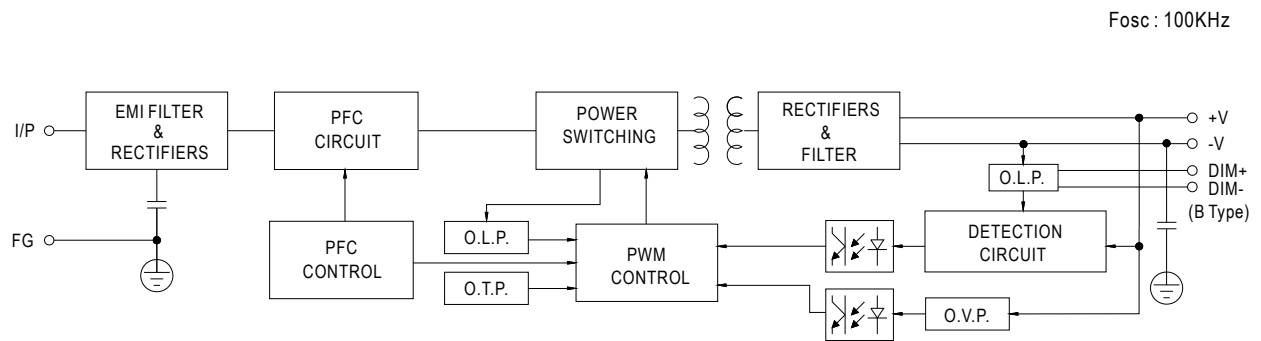
Notes

1. All parameters NOT specifically mentioned are measured at 230 V AC input, rated current and 25°C of ambient temperature.
2. Ripple & noise are measured at 20 MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Please refer to "DRIVING METHODS OF LED MODULE"
5. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" section for details.
6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
7. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
8. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.
9. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly tc point (or TMP, per DLC), is about 75°C or less.
10. Please refer to the warranty statement on MEANWELL's website at: <http://www.meanwell.com>
11. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m (6500 ft).
12. For any application note and IP water proof function installation caution, please refer to user manual before using: https://www.meanwell.com/Upload/PDF/LED_EN.pdf

Technical Drawings

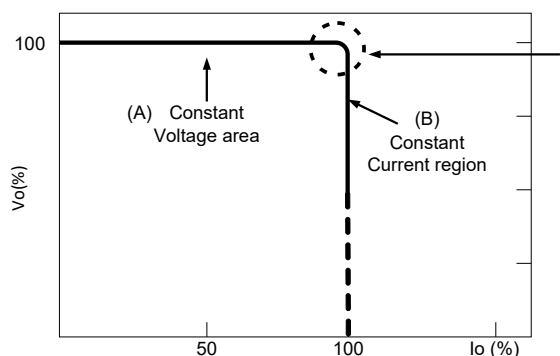


Block Diagram



Driving Methods of LED Module

This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.

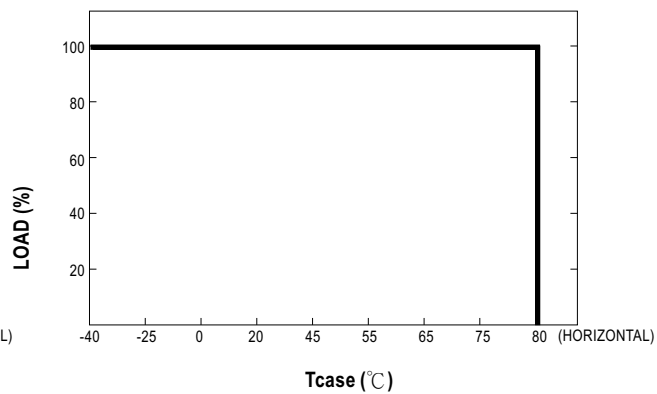
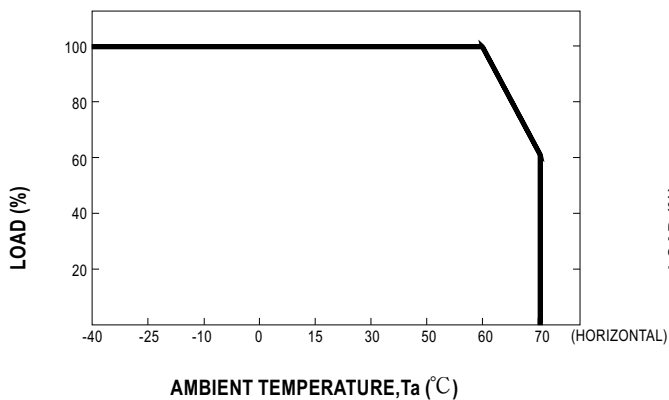


In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

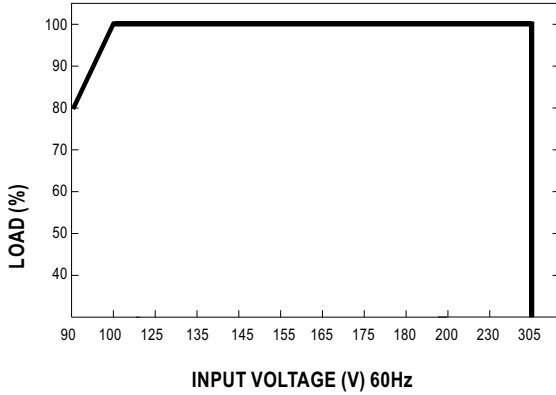
Should there be any compatibility issues, please contact Lumascope.

Typical output current normalized by rated current (%)

Output Load vs. Temperature

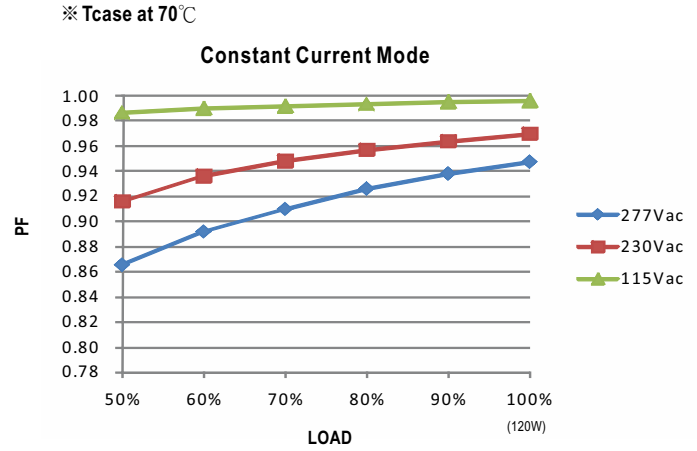


Static Characteristics

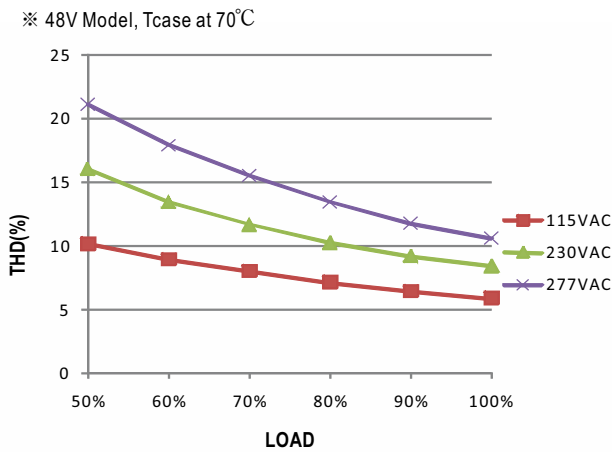


※ De-rating is needed under low input voltage.

Power Factor (PF) Characteristics



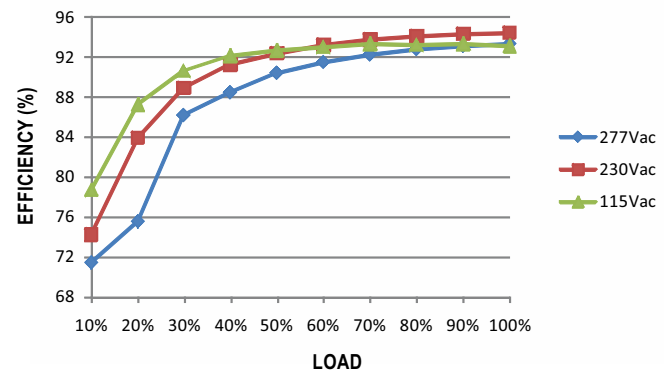
Total Harmonic Distortion (THD)



Efficiency vs. Load

HLG-120H series possess superior working efficiency that up to 93.5% can be reached in field applications.

※ 48V Model, Tcase at 70°C



Lifetime

